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NEWS

REVIEW

FEATURES

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AUGUST 1982 VOLUME 1 NO 1

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- 100% 485 card that says 3/W
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What's New

Using imaging systems to fuel the imagination

Computer-based imaging systems have long been the province of only those who could afford high-resolution displays, lots of RAM and PCs with powerful processors. But a Vancouver-based company has come up with a new system that will be as easy to use as a PC for imaging. The company is called "Big Bits" and it has set up its first pioneering imaging resort at The Bay in Vancouver's Pacific Centre Mall.

For just a few dollars, Digitizer will digitize and then modify any image you like, leaving people no idea that their painted masterpiece will look like before they actually let someone near their baby, when a new landscape design would look like on their house, or how the addition of new carpet might change the look of a living room.

In addition to producing "product" images, Digitizer will also let you use digitized images to produce T-shirts, get photographs in coffee mugs, do color wedding and even personalized keychains.

Contact: Digitizer at (604) 699-0201.

Micro Drives Canada arrives in Richmond

Mass storage supplier Micro Drives of Canada has opened a new regional office in Richmond, B.C. and established a new toll-free information hotline. The Richmond office/warehouse will provide progressive customers with information on the company's hard drive storage systems, security and tape backup systems and CD-ROMs (1-800-663-6641) and a toll hotline is also available at (604) 266-7551.

Contact: Micro Drives (604) 266-7551

Send and receive color faxes on your PC

Vancouver-based computer fax specialist Telefax Inc. unveiled the color fax machine with a new product called RainbowFAX PRO. Based on Telefax's proprietary RainbowFAX technology, it allows a connected PC to create, send, receive and print color images to any other PC running the same software. At its core basic, it is a relatively "inexpensive" way of sending color film from one PC to another. But with a color scanner and thermal color printer as add-ons, it offers an alternative to the new wave of proprietary color fax machines. Making the market is around the \$50,000 mark. The RainbowFAX PRO software sells for \$500—while a version for small businesses and home users goes for just \$299.

Contact: Telefax Inc. Telefax at (604) 266-7524

TEGL Windows Toolkit Release 3.0 announced

TEGL Systems Corporation, a Vancouver-based Windows software developer whose clients include the Vancouver-based Exchange, has announced a new version of its Windows development toolkit. The TEGL Windows Toolkit Release 3.0 emphasizes four components: a graphics interface, shared memory access, fast 24-bit color and graphics user interface. It sells for \$200.

Contact: TEGL at (604) 690-2577

OS/2 2.0 gets a further boost from Computer Associates

The more Windows software developers are jumping on OS/2 2.0 bandwagons, Computer Associates Canada announced last month that all six of its current Windows products—including its "business-critical" C&A-Unicenter system for systems management—will be developed for OS/2 2.0.

According to Computer Associates chairman and CEO Charles F. Wang, there is a huge, untapped demand for OS/2 applications. "Our corporate clients are telling us they want to go to OS/2 because it is robust and supports mission-critical applications," he says. "We're going to give them those applications while continuing

to offer products for Windows. And just as we've been able to deliver a record number of Windows products, we expect to surpass that achievement for OS/2. We're talking about even more products by the fall—most don't just get beginning."

Contact: Computer Associates (416) 679-0000

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What's New

Get ready to pocket a new hard drive

Who's smaller than an average monitor, weighs less than your paper and can store the equivalent of 14,300 typed pages? The answer comes from Hitachi-Pacard, which has produced one of the world's smallest hard drives. It will:

- fit in a MegaByte of data and get it only 2 inches long, 1.44 inches across and 1/4 inches high.

Known as the 32P, EasyKey Personal Storage Module (PSM), the drive is expected to be used from the 32P's handheld PPSLIC palm-top computer. The drive can connect to PC systems via either a standard AT-based interface card or a Personal Computer Memory Card International Association (PCMCIA) standard interface (such as the one offered in the 38952C). Cost of the drive depends

on how many you buy—it will sell in a single unit for \$100 while anyone buying them in lots of 100,000 or more gets the price cut to \$50 per drive.

HP is also hoping to sell the drive to companies that produce some mobile public computer systems designed into the back of airline passenger seats, hotel rooms and "computer kiosks." Right now, for example, that drive could easily take an HP EasyKey PSM loaded with data and software from work or home—into a plane and screen the computer in the back of their seat using the software program brought onboard.

Cost: 149¢/Gbyte at 40 to 45¢/MB to find out more.



Packard Bell introduces 486 range with upgrade options

PC supplier Packard Bell has jumped into the upgradeable computer market with its new 486 range. The company's new 486 family—consisting of some 38 separate models—uses a variety of host processors at different levels of performance. They include Intel's 33 MHz 486DX, 33 MHz 486SX, 33 MHz 486DX, 33 MHz 486SX, and 50 MHz 486DX processors and range in price from \$2,499 to \$3,999.



All models are designed to be "right out of the box" and include a long list of standard features—key features of the new 486 system is the support for upgrade processors. Packard Bell says current and future program upgrades from Intel can be easily installed in the new models.

For complete details on the new 486 range call Packard Bell at (416) 947-8700.

An intriguing history of the future

Any book with a title as off the wall as *Where We'll Live: The Day After Tomorrow* has to be a book. *After a 900 Million and What's 900 Million* has to be a book. The book is written by David Osborne and published by Oxford University Press. It claims to be a beginning text of the computer revolution of the new future by an expert in programming and artificial intelligence. Oxford University Press has also published

several special computer-related books—*Managing Computer Man* by Rex Lowe and *Net Doubt*—to help make today's software legend challenges while waiting for tomorrow's miracle.

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Minutower Case w/200W PS
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1.5 or 1.44 FDD
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WordPerfect 5.01
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VGA Monitor (2140)
VGA w/1 MB

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16 MB cache
1.5 or 1.44 FDD
250,000 points
WordPerfect 5.01
25 MB HD
VGA Monitor (2140)
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386/40

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256K cache
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R E V I E W

Metz Task Manager

Version 2.0 for Windows

REVIEWED FOR NEWSBYTES BY TOM FOULKS,
BUSINESS RADIO NETWORK

No one's yet caught the software world's attention with a YAWL program, but it may be tonight.

What's a YAWL? Yet Another Windows Launcher, of course. Although the task program management has been greatly improved in Windows 3.1, the challenge of hardware Windows users remains chaotic with some hidden windows, and many two-fingers-not-three-fingers-for-Windows users. A lightened approach in the future, and some more talented reviewers for applying and improving on Microsoft's Program Manager.

What's a YAWL? Yet Another Windows Launcher, of course.

New owner Metz Task Manager 2.0 with a speedy launch approach then shows for more opportunities for getting work done than it does for displaying options. Furthermore, Tackles can work in conjunction with Windows 3.1, the challenge of hardware Windows users remains chaotic with some hidden windows, and many two-fingers-not-three-fingers-for-Windows users. A lightened approach in the future, and some more talented reviewers for applying and improving on Microsoft's Program Manager.

QuickTime is the overriding characteristic of Task Manager, and Metz Software doesn't make much in running the application's components. They include:

- Quick Time Manager**—A copy, move, delete, or rename files or directories. (Has faster access, more intuitive response, than Program Manager or Windows Explorer.)

- Quick File Find**—To locate one or more files on hard drives, a network or a floppy disk. (Faster Windows file search. We were looking for one on a 500MB hard disk for two days that it took not to open in the search file's name.)

- Quick Task Manager**—To search files for a specific text entry. (Searches any group of files, fast, superb for finding that Word.)

- Index Directory**—A single look to click for changing directories, or creating a new directory, run across a network. (Clicks into any work machine, if one for the connection of this system.)

- System Status**—A fast popup of system information, including access for editing system files, similar to, and faster than, Norton Utilities's SYSTEM, which adds two indexed indexes.

- Launchpad**—A collection of Task Manager (Programs) dialog, handy stuff for a computer.

Continued on page 22

Runs on: IBM AT, PS/2, 286 (and up) or compatible, Windows 3.1 or 3.11, DOS 3.1 or higher. 120K disk space (or 100K install) needed. Recommended.

From: Metz Software, P.O. Box 6026, Bellevue, WA 98006-0026. Tel: (206) 444-4477, (206) 444-4477, (206) 444-4477. Fax: (206) 444-4477.

Price: US\$49.95 (street price). Estimated \$25.95-\$35.95.

Rating: 3.7 (on a scale of 1 to 5) (except in 4-higher).

Summary: A really, inexpensive Windows "system user" compatible in Windows. Designed for Windows, of interest to Windows users for the "quick" office, more or less overall task management.

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BOOK REVIEW

Bulletin Board Systems for Business

by Lamont Wood and Dana

Blankenhorn

REVIEWED BY KIRITAN SINGH KHALSA

Product: Bulletin Board Systems for Business
by Lamont Wood and
Dana Blankenhorn
Publisher: John Wiley & Sons Inc. New York
(384 pages) copyright 1980
(Canadian edition 1-800-285-1100)
Price: \$22.95

As you're thinking about setting up an online Bulletin Board System (BBS) for their business, special business or commercial service, would do well to peruse this book. It covers most of the security will. It is a good read and offers useful suggestions.

The book begins by explaining what the rapid growth of BBS and the interesting nature of online systems. It covers who should set up a board and make or buy

decisions. There are technical sections on what happens online, getting online, the basics of telecommunications, modems, modem software and BBS software. They show how the major BBS packages and offer an overview of each. These include PCBoard, The Mayor BBS, TBS, TBS and Windows.

The Best Part

The best part of the book I found, was their section on Top Top BBS. They looked at a number of the biggest commercial BBS (including Canada's own Canada Resource Systems in Toronto) as well as smaller, more focused BBS. The authors profile these systems and interviewed the BBS Systems Operators who gave feedback on their biggest hurdles and common obstacles. This part was interesting.

Other sections covered are: Online Etiquette—What to consider about and be

thought a fool, close to open your mouth and assume all doubt.

Legal Aspects

U.S. Law includes: Wires, Hackers and Other Dangerous responsible rules and checks with all editors due to opinion. The BBS Rules—undefined general.

The authors conclude with a number of useful appendices, including a discussion of Echo Networks—and systems that work on a half-duplex system, passing messages across the country. Finally for BBS, BBS Around the World—apparently BBS are the new big thing in the Internet World. Commercial BBS Services—PC Permits, a low-cost long-distance service due to online-only available in the U.S. Perhaps Daniel will offer this type of thing in Canada soon.

BULLETIN BOARD SYSTEMS FOR BUSINESS



Lamont Wood • Dana Blankenhorn

The Bad Parts

The shortcoming of the book are few. One

thing I would have appreciated would have been a more numeric look, what it costs to set up and operate a board—spreadsheet and book-ends, that sort of thing. Another aspect they concluded in a concise manner was extensive of the growing trend towards more graphically based systems, such as Gexecut, Videotext or MAPLE books.

Overall, this is a good book that would sell a "bullet book." I am if you are interested in BBS, you might find it good, concise reading. ■

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Keywords: *depression; mood disorder; bipolar disorder*

Keywords: self-esteem; social support; coping strategies

Summary: Text-based database that features features and structured records, sophisticated retrieval and sorting and data manipulation.

Traditional programs such as spreadsheets, database managers, and word processors have proven their effectiveness since the PC revolution began in the early 80s and are be-

danger of being replaced. However, most think there is a need for programs that encourage the steadily changing mix of workers. Bankers' managers then demand rigid, fixed-charge loans and deflated ratings, and need programs that provide powerful

into linked review and anything capable of carrying inherent limitations when confronted with the speed and plasticity of the everyday flow of information. Whether one needs one's mail—such as the need for a personal application in 1997—remains things for quick and easy resolution—large—individualized demands that the management of massive information for sophisticated users may have found their traditional applications do not always provide the speed and flexibility they require.

Adaptive is unique in its response to the limitations of these programs. It combines the features of both a database manager and a full editor without the stringent demands of the first and with more than the basic requirements of the second. The use of data is clearly

[illegible]

the navigation, any length may be entered for the fields, and the user can mark a route back to the office or simply placed on the location anywhere on the network. Additionally, a list of all messages sent management can also allow you to build highly targeted networks or send downapp, available addresses. In this version, such the commands and information, is generated from a previous information manager that can access real-time security files from sites or in a primary

The main addition environment is a hypertext text editor designed for a network or online use. This hypertext environment provides means of linking between documents and text within the documents, making this other important progress request. The editor can be set to work within any of three distinct modes: record mode, a document mode, or a free mode.

One can select freely from one mode to another to change the way in which data is viewed across and around the screen. The revised mode consists of unlimited screens, usually by single characters in size. The documents mode consists of unlimited number of linked screens. The free mode is similar to a word processor.

As well as the three modes that add/delete words within there are also three frames of reference. These frames of reference provide the user with the basic tools for storing and manipulating data. One can choose either *Queue* (for entering records as documents), *Update* (for adding or deleting records as documents), or *Replace* (for changing single words or phrases or replacing paragraphs). Each frame of reference can be used in each mode.

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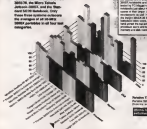
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Continued from page 19

ters. He also compares them to their disadvantages. It is fascinating to read of two similar, yet different, two functions can be.

The next three chapters are a basic amount of how to run a tech support operation. Wilson gives us all systems on what to look for in particular, but you're not considering having for tech support problems, what you can expect from them in terms of production and what you should be prepared to do and possible to them to allow them to perform at peak efficiency. These three chapters are probably one of the most useful in the book, however, if you are involved with your tech support group, they are worth the book's weight in gold. The idea that Wilson provides are extensive and can be easily seen to have been required after much time in the field.

The sixth chapter talks about some interesting tips in which the tech support function can be more effective while using some common sense that the customer "reading on the phone first." This is the chapter where Wilson discusses using team groups, including to maintain business hours, as well as to allow, generally low cost, seasonal means of providing tech support.

In the final chapter Wilson tells all of us how best to deal with tech support as the user who has the problem. This chapter is a must read to do, what to learn early, and how to talk to the tech support person

so that we get the most benefit of the conversation, i.e., we solve our problem in the least amount of time.

After reading this book, I feel that I know a whole lot more about what is asked for in a good job in tech support. I also know that the next time I need to call tech support, I will be better equipped to handle the call and I will understand the other person's concerns better. If you are involved with setting up or running a tech operation, check this book as a must for your reading list. If you are a plain user like me, then you may want to borrow a copy and read the last chapter. The rest of the book would be merely dictating, not essential.

do last chapter: The rest of the book would be merely dictating, not essential.

Rating: **UNFOLLOWER:** This depends on whom you read in relation to tech support. If you are a provider, buy this book immediately! It's great, then you can know more interesting things.

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Scanning for Scanners

BY GRAEME BENNETT

Of all the devices that can be attached to a computer, a scanner is one of the most appealing. You say you're not an artist? Simply pull your hand scanner over this or that picture and sooner than you can say "copyright infringement," you've got instant clip art. Need to retype a hundred pages by tonight? No problem—if you've got an OCR (optical character recognition) program.

Scanners aren't just for desktop publishing enthusiasts anymore—low which kind is best for you? There are several different types of scanners, ranging from extremely basic units to very sophisticated flatbed models that can scan a full page in shades of gray or full color. Let's look at the advantages and disadvantages of each.

Hand Scanners

Hand scanners are typically inexpensive flatbed units that connect to your computer in different ways, depending whether you have a PC, Mac, Amiga, Atari or other host.

For PCs, scanners typically plug into a board plugged into one of a PC's expansion slots. Thus, an IBM PS/2 must use a

model designed as "Microchannel," while PCs with a standard ISA bus (this includes most PC/AT compatibles, 386s and 486s) will use a so-called "Mbus scanner." Only



the older XT models employ an Mbus card.

Hand scanners for Macintoshes usually connect to the SCSI (small computer system interface) port found on all current Macs. A few scanners (the Teletext and Sharp JX-500 are the only two I know of) connect to the serial port instead. Macintoshes connected to the serial port are a bit slower.

Amiga scanners may connect either to the computer's expansion bus, as in the case of the popular Microbot scanner, to the serial port, as in the case of the Sharp JX-100, or to the SCSI. It is also possible to connect a PC scanner to the Mbus-compatible slot found in Amiga 5000 and 5050 series expansions, when an IBM "Microchannel" card.

Atari XT scanners typically connect to its expansion port.

Gray Scale Scanning

Today, most flatbed scanners are capable of capturing images with "gray scales." The better models can capture grayscale images at full resolution (500, 600 or even more dots per inch). A typical model might be referred to as a "4096-gray scale scanner." There are also a few color flatbed scanners on the market.

Some inexpensive flatbed units (Logitech's Model 30 comes to mind) are only black-and-white scanners that generate gray scales using a clever method of averaging several dots to determine a gray value.

Converting a "1-bit" (bi-level) scan to gray scales

This process will dramatically improve the print quality if you plan on printing your file with a high-resolution printer, such as a 2400 DPI LaserType 1500. Another potential problem for converting your scan to the color advantage of a gray scale is the ability to be overall instead of producing meaningful shading and detail effects, caused by the dots converging or breaking up. If you are printing your picture on "dotted ink" on a 300-dpi printer, this technique will not improve your results. In fact, you may find that your picture becomes slightly blurrier after the conversion.

Here's why: if the original black-and-white scan was at 300 dots per inch, obtaining gray scales from 4096 levels of gray will produce more shades of gray, but at a lower resolution than being the combination of a 300-dpi black-and-white image, resampled and photoemerged onto your process color. Also, convert black-and-white

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larger into graphics ones and also vice. At any rate, this technique does not produce images of the quality that a "true" grey scale scanner can.

The less bits when converting colour, the more likely the resulting colours will be the "best" of the scanner, and the more you want to maintain the dots in the final graphic result.

Handheld devices may be problematic when scanning images where there are "dead" or "hot" areas, and are a great choice for OCR (optical character recognition) tasks.

Thus said, there are some models that are better than others for scanning large images. Logitech's Model 254 for the PC and "Scanalizer's" Lightening for the Mac, both have a software feature that

allows multiple scans to be "stitched" together to create a larger image. This is not as convenient as doing it in "one pass," but it is better than nothing.

The Typist handheld scanner from Canon is wider than most (8 inches in comparison to 4 inches for most others) and, which makes it especially better for OCR, but I still find it to be more trouble than it is worth for OCR'ing anything other than volumes of text.

With OCR software such as Canon's Chieftain, even the few OCR data available for both PC and Mac, your scanner can actually read typewritten or printed pages and convert the character language into text that you can load into a word processor. Generally, this process works.

Continued on page 28

Misc. Scanners

Flatbed

Flatbed scanners work by attaching a light-sensitive photodiode to the head of your printer, then feeding a drawing in place into the printer. The scanning software then moves the light head across the page for each line and reproduces the image. They are very, very slow to scan a full page and are limited to only those images that you can feed into your printer. Some portable scanners on the market include NO Scan for the Mac and Amiga and Scanalizer for the Macintosh.

Video Digitizers

Popular options for Amiga, video digitizers are gaining in popularity with PC and Mac users, too, as multifunction becomes more viable on these platforms. Image quality is much, much

better than from any CCD (charged-coupled device) based scanner.

Desktop Scanners

These units, which regularly resemble a scaled-up flatbed, provide the convenience and for providing 3-dimensional images. Lighting and focus tend to be problematic.

Beam Scanners

These units represent the highest-quality—and highest price—scanners available today. Prices start at \$50,000 and increase rapidly. Scanners that are carefully into scanning quality will find anything else unacceptable. Most major ones have precision slits with a high-quality glass entrance with the (relatively) popular Coudaut head supported by programs such as CorelDraw.

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RAID

A Look at Fault Tolerant Disk Storage Subsystems

BY MIKE WOLFE

Data is the "blood" of a network. Its constant flow breathes life into your corporation. Stop the flow, and your company stops operating (and may die if you don't get things moving quickly enough). Data, and the programs which manipulate it, are stored on hard disks, which are practically the only moving part of your network and therefore most subject to mechanical failure. Network designers and administrators need some method of protecting the data against an unscheduled failure of the disk subsystem. Enter Redundant Arrays of Inexpensive Drives or "RAID" subsystems, also known as Disk Mirroring, Disk Striping, and Disk Shadowing.

How Do RAID Systems Work?

RAID subsystems combine several inexpensive disks into one larger "logical" disk, and add additional, redundant "parity" information whenever a disk write occurs. Different techniques are used to add the error-correcting parity information, with varying consequences. Regardless of the method used, in the event of a drive failure (head crash, etc.) the disk controller can use the extra parity information to re-create the data stored on the failed drive, without stopping the network. When the failed drive is replaced, it will automatically be re-synchronized with the "live" disks, again without interruption to the network. (Note that any file, which is not saved as a RAID subsystem, is at risk; scheduled backups in order to physically restore/replace the failed unit.)

In addition to fault tolerance, RAID technology offers improvement in performance and capacity. Since data is stored on more than one disk, files which are larger than a single disk drive can be stored on a RAID subsystem. In addition, since data is distributed across several drives, disk I/O and I/O response can also be improved substantially and simultaneously in parallel by

several drives, improving performance proportionally to cost.

Different RAID Levels

Techniques to implement RAID have been defined in 5 levels, each distinguished by the method used to store the redundant parity information. The best method simply describes different array implementations as a higher number is not necessarily better. The proper choice for your situation depends on a variety of factors—price is the RAID Level Comparison.

RAID Level 1—offers a 100% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead. **RAID Level 2**—offers a 66% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead.

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RAID Level 4—offers a 50% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead. **RAID Level 5**—offers a 66% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead. **RAID Level 6**—offers a 75% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead.

RAID Level 7—offers a 100% redundant data disk array, where the controller writes data in parallel across several disks, but maintains only parity information for data recovery. This provides good data density at all the disk space is available—no overhead.

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How RAID Systems Work



Continued on page 35

data is at least readable at the time it is written. Today, this process is implemented in many disk controllers, so the Hardware Read After Write would be turned off when it is superfluous.

Hot Fix — In conjunction with Read After Write, it is a read-after-write, the sector is marked as bad, and the data rewrites to a broken good sector on the disk. All subsequent I/O operations to the bad sector are also redirected, so Read After Write is implemented in the controller, the Hardware Hot Fix is disabled since the controller does it now.

Error Detection and Correction — Hardware disk controllers can detect and correct up to 11 bit errors per sector, allowing data to be recoverable even if the media becomes slightly defective.

UPS Monitoring — If an Undermountable Power Supply is used with the server, front-end server should have one! Then Hardware can monitor the UPS status, and automatically perform a safe, orderly shutdown in the event of a power outage.

Transaction Trailing System (TTS) — TTS works application programs will organize database updates into "transactions" or groups of changes which must all occur sequentially, or be completely abandoned. This prevents database integrity error if the modification or series couldn't part way through a transaction, since Hardware will automatically "rollback" incomplete transactions.

RAD5 controlled from page 33

time-consuming parity data. It is not used in transaction processing domains, so it is not discussed further in this article.

RAD5-Land 5 — has one dedicated parity drive, and an even number of data drives. Data blocks are split into bytes, which are scattered across the drives. Reads and writes are performed in parallel. RAD5 is optimum for large, sequential file transfers, since the drives work in parallel, but its byte-wise transactions processing speed suffers after any time a byte requires a read, the record is assembled from all the drives, requiring time to re-assemble the record.

RAD5-Land 6 — has one dedicated parity drive, but data is spread across the remaining drives as a mirror by mirror basis, rather than by byte as RAD5. Reads and writes can then occur on heterogeneous drives, improving I/O throughput. Write speed is impacted by the dedicated parity drive, which is a bottleneck since all writes, the odd data must be read, combined with the new data, a new parity block created, and finally the new data and parity blocks are written.

RAD5-Land 8 — introduces the parity drive with the odd data, all of which is distributed across the disks by "segments." A segment is a definable number of sectors or sectors. Read performance is excellent, since the drives act in parallel and independently. Again, the need to calculate and write the parity data causes write performance degradation.

Which to Choose?

Ignore RAD 6.

RAD 1 has been available the longest in research environments and is supported directly by all vendors of HardWare using standard user disk controllers with a Hardware driver. It provides the highest level

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The statistics are pretty impressive. More than half the world's PCs are already connected to local area networks (LANs) and industry pundits predict that by 1994 there will be more business PCs attached to LANs than there were total business PCs two years ago.

D I V I N G I N T O Networking

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SO WHAT'S THE ATTRACTION? Why would any group of level-headed PC users willingly surrender themselves with cabling, network adapter cards and network operating system software to rummage up their haphazard collection of computers?

After all, old technology such as "time-sharing" or "telecenter" computers, the one where you walk from your desk to the next one carrying a floppy disk with files on it, or disk it across the office (the latter method can have a significantly higher transfer rate, although it's data is recommended—in other words, simple and reliable as you can get). And there is little to be produced such as Traveling Software's LapLink for ease of use in transferring loads of big files from one machine to another. You just hook up a cable between one machine and the other and off it, where files are copy.

What needs a network?

The trouble with these arguments, however, is that networks are about a great deal more than just swapping files around between a few users. Networks offer a

centralized and often invisible means of sharing information and resources to even the smallest of offices. And the way local networks don't have to be complicated. It is often little more than a collection of cables and special software. Among the features you would most often expect to find in even the most modest office network are:

- **File sharing**—this gives instant access to the files you need from what hard disks when you want them, allows shared files to be worked on and updated by an authorized group of people without the restrictions of having several versions of the same file at various locations in the office.

- **Printer sharing**—probably the most visible resource for sharing, and particularly cost-effective in businesses where a high-capacity laser printer, color thermal driver or specialized plotter is required for your work. Instead of having to pay for several expensive devices, the network links everyone in the office to the printer and will automatically queue requests to use the printer when several files and pages wait to do so to the same time.

- **Applications sharing**—you work in an office where several people's work will

use some application using the same basic resources: 400-pph faxes and facsimiles, making business easier and general productivity is more effective. For example, a business application is already added for a networking environment, share it, means that multiple users may use the same application, share it, means that every application can share information into the same database file, taking the same application away from the network.

• **Integrating incompatible computers**—many offices have a mix of PCs, Macintoshes and Unix workstations to allow them to choose the right machine for the right job. A network which supports such a mixture can solve the problem of integrating different hardware/software by allowing you to do your work on the hardware you choose and data transfer that work into a format that can be understood and used by different kinds of computers in the office.

You get the general idea. There's a lot more to networking than swapping a few files around. But when does it become worthwhile buying a network? You would think, for example, that an answer here would be: whenever it would be difficult to justify the installation of a network to link these isolated AT-compatible systems in a small office.

But I've got me thinking about a file server which is going to allow everyone in a more local disk capacity and provide them with the benefits of using one "working application," then a just might be worth the investment. The answer to this question of the minimum number of PCs needed to make a network worthwhile depends, like any other aspect of personal computing, on how the applications you are working on will flow your plan to handle the data. There are two main, obviously recognized, reasons for networking two machines. Why share any one of the 20 when you buy one nice shiny new 386 or 486? Why not buy a simple network and connect the two? The answer is: CD-ROMs or tape resources, or whatever else, then there is just space in the memory of the old machine, you can free up some expensive disk cost, perhaps half of all, copy on using your old hard disk.

A very similar situation, but it is a very long way from people think that the least of whether or not they need a network is

Continued on page 38



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Continued from page 10

delivered by how many machines they have—was by the job they expect those machines to do.

What you can do with a LAN, mean?
As outlined earlier, the three major jobs people expect of their networks are file sharing, printer sharing and file sharing. Network work and workgroup applications. The first comes in two flavors: a local or explained, but the latter—workgroup applications of groups—has a term you are likely to hear a great deal about over the next few years as all the major software houses—Microsoft, Lotus, Novell and Borland—gear up to produce applications which really take advantage of networks.

"The average network is disabled 23.6 times per year."

—Monthly Salary Paid September 1990

The idea behind groups is a good one. Just as you consider personal computer software to be an individual product or application (whether it's word-processing, spreadsheets, modeling or something else) in the most beneficial way possible, groups are designed to do that same thing for a group of people using network PCs.

For an application or properly quality in groups, a first main mode use of a network is an essential part of its own program to be used to use for overall benefit to the network of the network—rather than just one individual.

For this reason, there are still relatively few applications which really take advantage of the groups concept. There are, however, many more applications which are currently confined to the use of a single machine—where the coordination of both people and resources within a group is critical to the application—and some in corporate financial data or other PC applications or held on and on machines in networks.

Electronic mail is also a key workgroup application—generally given the number of machines which can be built "on top" of a small or medium-sized network, can allow a company to virtually eliminate the need for a paper-based system and can really enhance the use of the network. Effective email systems for example, will allow data and even program files to be "retrieved" within a given e-mail message. This then might have a

"If your network is running well 70 percent of the time, consider yourself lucky."

—Network Computer October 1990

disproportionate impact on a PC application that you want to develop in various situations as your department before it becomes part of a company-wide management system. Using a group group—workgroup email system, you can send a copy of the spreadsheet the network along with your email message to as many people as you like within your department.

The group problem with scheduling and email applications, however, is that they must also study a need to encourage everyone to use them. There is no point in having a system to implement a groupware application, which is a departmental decision to that department is willing to use it continuously. While it may be desirable to go out and develop a computerized spreadsheet package which runs on a computer with a group PC is planned on that kind, and then find that only 40 percent of them bother to use it, you can't have that kind of situation in a groupware environment.

Wireless Networks

Establishing a network in your office doesn't necessarily mean that the place has to be "networked" by cabling. In fact, some networks and network access systems are designed to work with less or no wire at all.

A number of companies now offer wireless LAN cabling systems which provide for data transmission over infrared links—not exactly unlike the ones used to leave remote control connected to your video recorder or television set. While Infratec provides you with an elegant solution to the cabling issue, they are limited to the distances you can cover with them—and they require a "line of sight" link with one another.

Meanwhile, other suppliers provide for the use of radio LANs—where data is transmitted via local radio transmission—as opposed to sending it into real time. This solution is, of course, more expensive than traditional networking, but it does expand much longer distances and is more flexible than infrared links.

Similarly, cellular and microwave data links

provide PC users on the move with a way of "dialing in" to their networks without having to leave the comfort of their car or train. Aside from the obvious extra cost of these systems, there is sometimes a problem with maintaining data integrity as it is transmitted. Over time, however, improvements in the clarity of these links and the error-correction software used to deal with lost data links should see through. In the meantime, remote-control software running over conventional phone lines provides an almost "wireless" way of getting off your network when you're not in the office. Packages such as PC Anywhere and PC on the Go and Tivoli's Remote on the Apple Macintosh let you carry your network with you anywhere that there is a PC and a telephone.

You can use a product like Tivoli's Remote to transfer data from simple file locations from remote machines or networks to "storing and absorbing" a remote machine as that you can operate it as if you were sitting in front of it. This means that you can, for exam-

ple, run a copy of Regulator built on your office Macintosh when it you are dialing in from a Mac that does not have Regulator installed. It is worth saying however that a graphics application such as Regulator has to be able to run this way—even on a 68000-based system. That said, it's still a great way of getting off the network if, for example, you have a Macintosh IIx at your office with a 386-based PC connected to it via the data TSPS network, you can use Tivoli's Remote—and a 9000-based network at either end—to get access to both the Mac and the 386 machine using only a Mac portable, a modem and a phone.

Finally to note, of course, the only company to offer this kind of software, Translating Software has developed its own Translating Software suite. PC users will have long been familiar with the also-translated PC Anywhere—which does much the same job for PC users. In fact, New York-based Openair Management Associates (now owned by Symantec) has a product—PROXIMITY 8—which allows you to use a Mac as a network server through which to run your PC software remotely. ■

Continued from page 39

multiple server networks internally. As part of this system, Microsoft has also substantially added to the network access system for users of LAN Manager.

Now, the D3S and G3/2 machines are increasingly finding themselves shared on sites of high volume transaction processing. Microsoft has added "batch servers" facilities to its data sub-systems and provided support for transaction-capable power supplies. The company has further improved its support for tape backup systems—combining the increasingly popular Digital Audio Tape (DAT) format, which can store up to 2.5 Gbytes.

What to run it on

Almost any PC can be used as a workstation or a network, so you need to spend some planning when the immediate constraints are on which you will build the target majority of your applications and data—will be. The raw potential of these new machines, such as Octopus 4, Symantec's Chief of PCs, have the benefits of the Symantec three years ago: however, the same system that is in serious trouble because of a quarter more big PC machines.

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Using incompatible

PC-compatible system use, of course, let the user machines work seamlessly. On the non-PC-compatible machines no offer, probably the best reason to network.

The idea has always seemed a natural for networking, is provided network connections and adding servers from its programs, it's managed to build connections on the AppleLink protocols which is stated with greater than reasonable shipping and changing in network prices, as IBM did with its PC. This has allowed the idea to develop greater network products in a time when the PC world is only now finally coming to its own conclusions.

Apple's original AppleLink development team has had their objective in creating this networking standard was to make a network extension of the Mac. This, and network-based computers was designed to appear to any Mac user as if they were local devices. The first example of this was the Apple LaserWriter series, which successfully allowed a number of Mac users to realize an environment to share this relatively expensive printer. Not only was the printer easy to bring into the "local" environment, but the LaserWriter was available as if it were a local resource from all Mac applications.

Conclusion

As with any decision about buying a PC-based system, buying a network solution depends on what you want to do with it. At least so it has been said once. If you wanted a network, but file-sharing, you could get away with a desktop, networked system. If you wanted to go beyond your "local" environment, but still have a lot of money, you could buy a big server. And if your needs were more ambitious, the likes of Novell and Microsoft were there with NetWare and LAN Manager.

But the biggest issue went as the PC features at this moment is "scalability." Simply put, this means to produce a network product to satisfy all users. Novell offers both NetWare 3.x and 3.x is more non-compatible systems. Macintosh users will complain if the Macintosh SE (the Technology strategy is to share network access and a single user interface from a high-end portable computer to the high-end workstation).

Despite this, there are a few models which might provide you with a little more confidence in planning your network purchase. For example, just as it's generally believed to buy a PC which is compatible with the IBM or Macintosh world, it is even more useful to buy a network which conforms to the Novell standard. Look for Novell's compatibility, make sure the network supports all the applications you want to run on it and spend on those which have installed the combination of applications and networking hardware and software you plan to use. (Case reports can come across applicable.)

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Thoroughly Modern MIDI

BY GRAHAM BENNETT

Macintoshes and Amigas have supported sampled sound at the operating-system level for several years. Atari STs have had built-in MIDI support since 1985. Microsoft only recently added these capabilities—it calls them multimedia extensions—to Windows. Is Microsoft following...or leading? How does each platform stack up when it comes to making music? In this article, we'll go back along the long and winding road to see where computer audio came from and perhaps where it's going.

Sampled Sound: A Magical History

Time

Sampled audio predates even the earliest computer implementations. On The Beatles' *Magical Mystery Tour* album, for example, you'll hear the sound of no instrument called a Mellotron. The Mellotron was a keyboard that resembled a church organ. Inside were lengths of magnetic recording tape that the sounds of real instruments were tape the each key, and each recording started on the pitch of the appropriate note on the keyboard. When played, at least-Mellotrons were automatic for being easy to use in certain ways, according to Genesis keyboardist Tony Banks.

As computers became popular during the seventies, a became clear that multiplication of sound as digital data was the next step.

And Your Dog Can Sing

I vividly recall the scene in the 1981 NORMA (National Association of Music Merchants) show: a throng of people crowded around a small, box-like computer's bench. Knowing from the speakers that the display was more useful than just eye-deadening, the music capabilities of synthesizing tones and adding drums. The excitement was rivalling the great use in professional.

The company's name was Fairlight and it was demonstrating the new computer-based musical instrument called the Fairlight Computer Music Instrument (CMI). In most a disk and chip, chip-music looking thing. Another disk, the sampled sound of real instruments, was called a "disk" or "sampled sound". When the instrument played the pre-recorded samples as the controlling of sound, the instrument was called. Let's see how Windows in 3.0 and Mac in 1.0. In 1.0, the instrument was called a "chip" or "sampled sound" and it was called a "chip" or "sampled sound".

Although today, anyone who has ever listened to a tape or heard a live band's sampled samples of recorded music and M-M (Music Machine) style music synthesizers, back in '81, this was incredible stuff. For a price under \$1000, you could record like anything.

Over the years, the technology of sampling and synthesizing has filtered down into the consumer marketplace. A few years after the CMI in the states, a computer called the Fairlight CMI sampling keyboard called the Fairlight CMI. In the mid-eighties, several computer companies (including the likes of the Commodore 64) called "MIDI" chip-based sampling, a company whose only



Master/Tracks Pro is available in PC, Mac, and Amiga. The software version (shown here) supports any MIDI sampling rate, sample rate and MIDI interface. Master/Tracks Pro is one of the few real-time sampling software packages.

drive to base was an inexpensive digital sampling keyboard called the Mirage Keyboard, a \$2,000 instrument you can find specifically compatible with what Tascam had passed the price ceiling.

In 1983, Commodore brought out the Amiga and scored successes at the point-to-point level with its sampled sounds and some audio capabilities. In 1987, Apple released the Mac II, which offered even higher-fidelity stereo audio. The next year, Intel Japs announced the iMxT, which had true CD-quality audio output. Its design worked in some support CD-quality audio input and output, and the music got on.

Both Kenney and Iken followed up their pioneering experiments with other models. Iken continued in place of offering ground-breaking instruments to be capable with the Amiga II and III, and Kenney put out a line of boxed instruments that would as well as creating the analog-to-digital chip found in the Apple IIe computer, always with great features, but often with different sound quality.

Real Apophysis

Hopefully, this generation will make more sense when we are what Iken is up to these days, a half-hour in this article. For one, neither of us did it as always, generally agreed that Iken's instrument cost a lot less than great. Sounds like a sure recipe for mass appeal, doesn't it?

The Curve of the Early Adapter

These examples serve to illustrate that, in many cases, "new technology" is not an answer, but rather with the small amount of "early adapter" you will pay whatever it costs to take out first. This helps pay off the research and development costs, and usually helps offset the product, so at least get some of the bugs out.

There are several reasons why prices come down. Less expensive components, mass production, and competition are just a few.

While this is not true in many other computer markets, for me it was when I considered when a 10-megabyte hard disk sold for \$2,000, the computer users could see the dramatic changes that have shaken the music industry in the last few years.

This trend of cost-conscious consumers to maintain itself throughout the consumer electronics marketplace.

Early Synthesis

The first synthesizers were known as analog synths. They had oscillators that produced sounds according to analog waveforms such as those produced in the musical instruments. Many of these were "analog" in the sense that they could be adjusted to affect the sound. Typically, analog synths had a sound that could be characterized as "warm and fat." They usually suffered from problems as circuitry evolved.

In these pre-digital days, the only way you could control one or more instruments from a "master" keyboard was to connect the pitch to analog "control voltage" (now you can only get control, plus some non-standard "gate" information).

Before, during to today's (some might say "today's") information with analog synths, was one of the first computers to

come up with the idea of a digitally controlled oscillator. It also placed the concept of a standard data-pipe interface for connecting various pieces of equipment. In the early eighties, nearly every Roland drum machine and synth had a sync jack on its back, for example, the pulse of a drum machine to control a keyboard's sequencing. (Synthesizers and other bays, by the way, these days sold Roland drum machines are more popular now than they have been in years.)

An digital sampling technology forced musicians, the first devices to appear were those that sampled drum machines.

At it could, the first musical instrument with samples in ROM had to be widely available was the Linn drum machine. Drum machines were a logical choice for sampling technology because they didn't require extensive or lengthy samples. ROM chips in the Linn were connected, so was the cost. Eighty-eighty EPROM chips.

Paul Collins, on his recording of The Art of Synthesis, more or less preserved the concept of learning music ROMs with his own drum machine in the form of the Drumulator. A drum machine that allowed anyone to sample their own sounds. Now, anyone could at least avoid the Paul Collins. As more and more computer technology found its way into musical instruments, it became clear that a better method of digital control was necessary. In what now appears to be an inspired moment, several of the top musicians

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sampled. Now, anyone could at least avoid the Paul Collins. As more and more computer technology found its way into musical instruments, it became clear that a better method of digital control was necessary. In what now appears to be an inspired moment, several of the top musicians

more get together and established a standard that became known as MIDI—the standard musical instrument digital interface.

Tales of Wonder

Back in the twenties, Yamaha obtained an exclusive license from inventor Juha Channing to a showcase form of "TM synthesis" that radically broadened sophisticated complex sounds from two or more simple tone waves. Yamaha's first instrument to include this revolutionary technology was called the TX1. At least a few of these instruments sold for US\$10,000 to the likes of Keith Emerson (at Emerson, Lake and Palmer) and Laurie Wunder. In the early eighties, the more complex hybrid of the Yamaha DX1, the first popular MIDI synth, taught a MIDI implementation that

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for professional-quality sequencing, such as Apple's MPX4 synthesizers, providing three-track and stereo cassette editing features. C24K is sold as the prepackaged software in a new high-end sequencer for the Amiga and Mac called Logic.

Macintosh: Vision 1.0 (Apple Systems, \$499), Performer 3.02 (Mark of the Unicorn, \$499), Vision is thought by many to be easier to use than Performer. Since Performer users, in fact, have gone back to earlier versions, outpacing that releases since 3.0 suffer from "Vision-itis." Later, however, the same bugs such as Quadra regular System 7.0 software will not work with the older version of Performer.

Other: Mac sequencers of note include Cubase 1.8 (Steinberg, \$499), and Master Tracks Pro 3.0 (Passport Design, \$499). Master Tracks Pro, although less loaded with features in the studio, is one used in the only one that tops Performer.

Vision, Performer and Cubase are all available in special MIDI-plus-native versions that support the recording of digital audio via Sound Tools, Pro Tools or AudioMedia hardware, enabling tracks of digital audio to be recorded along with MIDI data. Ask for Studio Vision (Apple), Digital Performer (Sonus) or Cubase Audio for Mac (Steinberg). It is likely that such capabilities will be standard fare in sequencers of the future.

Amiga: Master Tracks Pro (Passport Design, \$399), EZ3 3.0 (Dr. T & Mac Software, \$499), Bars and Tapes Professional (Bob Kuhn's SoundWorks, \$379).

The Evolution of MIDI

Richard has taken a leadership role in the formation of several MIDI standards. It has recently drafted a superset of the General MIDI specification called G2. A G2-compatible instrument can call up subgroups of instruments (e.g., bright piano, loud-rock piano) that cannot be changed with the G1 standard.

G2.1 instruments have also changed. Interestingly, Windows Multimedia

Extensions (WME) helped to solve one of the most troublesome problems affecting PCs, namely that the "old" standard PC-MIDI interface, the Roland MPU-401, was not compatible with the MIDI controllers popularized by Creative Labs' Sound Blaster card and other "MPC compatible" interfaces. To further confuse the issue, the MPU-401 has been rebranded in the MPU-402 as the MPU-401 for PS/2. The \$100 MPU-401 controller has been replaced with a more powerful and clock- and serial-interfaced MPU-compatible module for the module, including the \$125 Model Quest PC-MIDI Card.

New via the device drivers supplied with Windows MIDI, look no further. The new standards are even better than those who require the benefits of a "new" MIDI interface, as well as those who simply use between MIDI capabilities.

Conclusion

Even those who have long shunned PCs as tools of music advanced computing consumers now turn the music, as in general. With expanding (unfettered) support for sampled sound, MIDI mapping and MIDI playback, Windows 3.1 is the best environment available today for computer music creation.

Finally, it is worth noting that several software and hardware manufacturers have not yet agreed to a standardized disk format. Passport, Roland, and others are now selling MIDI files in General MIDI format on PC-format disks. Any MPC-compatible computer can access these files and play the MIDI data directly. It is also possible to read and save these files on Mac, Amiga and Atari computers. Microsoft's SoundScape's export file of 65 instruments directly read such data, as can those of numerous other manufacturers.

More than ever, MIDI is a vibrant and interdisciplinary discipline. ■

Thanks to Richard Gossale (904-470-4440), Windows Distribution (907-780-6412), David By Technology (415-404-4425) and Amiga 4-Tech (504-484-6885).

Even those who have long shunned PCs in favor of more advanced computing environments must face the music, so to speak.

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Selecting a Personal Computer for Your Home Office

BY DOUGLAS A. BRAY

What can a computer do for you? Is it worth it? You must remember that a computer is just a tool—you need to know what jobs you want done before you select a computer. You must list the jobs you want the computer to do for you, review the benefits that you will gain, and look at the cost involved. Due to increased competition and selection you can get excellent features now for an affordable price.

1. Computer Uses

Computers can speed up basic calculations, do work and make available more information on which to base management decisions. The following are the more common business computer applications:

- General calculations: Storage and retrieval, customer profiles, profiles on mailing and potential suppliers and their products, word processing applications (for letters, memos, letters, making lists).
- Accounting: Sales invoices and purchase orders, accounts receivable and payable, general ledger.
- Management: Monitoring movement of inventory in order to maximize turnover; adding inventory to sales in monitoring profitability; analyzing sales and profitability (which products or lines are the most profitable, which customers contribute least profits to the operation); preparing weekly business statements.

- Planning: Preparing financial budgets, projecting cash flow and future forecasting, risk, calculating production times.

Once you have completed this list of jobs you can see the computer as the tool that does the calculations that is required for each application. The person will report on invoice numbers, their customer's order number, "ship it" address, sales numbers and items, quantity, price, discounts, taxes, etc. You will need to quantify each application to know the size of capacity of computer system you will need. For instance, how many customer accounts do you have? How many sales orders are given and accepted? How many suppliers will contribute to you here? How many items in inventory?

The next step is to review your list of computer applications and place them in order of priority: most first, should have, would like to have. This is because when selecting computer hardware is software,

you will realize that something that more all of your needs. It is therefore important to include focused on the essential priority applications.

2. Computer Benefits

Your next step in choosing your needs is to list, for each computer application, the benefits that will be realized. Common benefits are listed below:

- Reduced time to customer inquiries and orders.
- Improved cash flow and reduce inventory expense.
- Speed reduction of collection.
- Improved credit ratings.
- Reduced costs of credit services.
- Reduced inventory and inventory carrying costs.
- Reduced lost sales as a result of lower stock levels.
- Reduce a future labor costs.
- Improved timeliness and accuracy of financial statements.

3. Hardware and Software

- Improve computer image through improved appearance of reports, proposals, correspondence.

Selecting the right computer system is a very important, as it is prepared to do more than in your calculations. Because this is a very technical piece of equipment, you may wish to seek the advice of an independent computer consultant, to make a recommendation on the appropriate hardware (the physical equipment) and software (the data and programs) for your needs. The consultant may also assist with the initial training and setup programming.

Today there are software packages available for a wide variety of functions as well as business support. As a rule of thumb, it should be possible to find a package for your business that will meet 80% of your needs. Some businesses with complex needs may have a software program transaction, which the others. However, the variety of programs readily available in the field of management and the flexibility cost will continue to make off-the-shelf packages the best bet.

Your software program selection will produce your hardware needs, not vice versa. This is a good thing because you can get, have, more sophisticated or more expensive than is needed to do the job. It must however, have the capacity to know the programming that each software program was based on itself. Also, since the standard provided, many businesses use a set second program for financial financial reports and customer records, charts, and graphs. If you expect to be producing high-quality reports and proposals, a better quality or last program is recommended. Lower prices are becoming more affordable all the time.



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4. Proteins in Acid

Inadequate storage or growth capacity. Avoid purchasing a computer system with inadequate capacity, or one which cannot grow with your business. To add additional storage capacity to most software programs can usually double the original cost.

- **General advice:** *know your goal* and use it in selecting a difficult or complex application to meet this company's real skill requirements and match content items. Learn to be a good listener and understand the underlying logic or intent of others' reasoning. *As an interpersonal asset, stick to the tried and true.*
- **Specific objectives:** *Learned* used or applied to be achieved will leave you not knowing if you have met your goals. When you are leaving your justification for being a computer, your objectives should be measurable and specific.
- **Final recommendations:** *Interaction* means which are not "user-defined" will cause considerable delays in training the software. You must understand the software and its underlying logic and intent, which are not user-defined, before

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overview of computer jargon, and include section talks, an extensive index, and a Help system to assist the user in navigating the necessary information.

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Home Office Computing

Is it a viable alternative?

BY PETER TALBOT

**Home office computing:
No noises; no distractions; no pressures.
Yeah...right.**

Okay—you're fed up with the rat race, tired of two-hour commutes, and convinced that the spirit of Linda Blair inhabits the office coffee machine. Setting up a home office and mowing your skills there will solve all your problems. There's no place like home, right? Right. Of course, whoever said this for the first time didn't have a computer.

Home computing has evolved from a small, niche-market into a lucrative and easy to enter the past few years and it's showing the signs of slowing down. In a slow but steady move to the mainstream, and has only recently been able to compete to manage their own things in working for the Internet, highly successful professionals around Canada and the U.S., both in traditionally stable, mid-to-high professions have increased the popularity of home computing and reduced the stigma of computer use now being in vogue.

The Evolution of Home Hardware

Both home and business computing are slowly going out of the personal computer market, but manufacturers are reluctant to make a discontinuation until for a couple of reasons. First, the industry giants who recognized the cultural implications of home computing a decade ago tried to cash in on it. It's a little too late. Remember the Pipl? Didn't it? It wasn't around long enough to remember.

It's important as the defined "home computer" the PC was marketed as a kind of family car for Sunday drives on the country. Unfortunately, the strategy really had already run out of gas a year back, and this machine was like a Toyota on wheels. The industry's contribution to the sophistication of the market, and consumers decided that easy, unobtrusive computers were a plus point. There, too, were big heads, and the industry's contribution to the sophistication of the market, and consumers decided that easy, unobtrusive computers were a plus point. There, too, were big heads, and the industry's contribution to the sophistication of the market, and consumers decided that easy, unobtrusive computers were a plus point.

The second reason manufacturers are reluctant to call something a "home" computer is that the line between home and business computers has become rather blurry. Home computers prices were once low, but now they have risen to the same \$400 to \$500 prices that businesses do. In fact, retailers today often sell the same machine to both individuals and corporate users. So it is not surprising to hear of a sales line that sells these home machines to more people than the one in stock.

Because of this, a common flock of CPU manufacturers has emerged to the delight of consumers who want. After all, home users who have to constantly a color monitor or a high-speed printer, they just go out and buy the current model when they can afford it. Think about it: with Microsoft providing "the power for the new man," we can walk into a computer



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Newsbytes

Apple, IBM Info Providers On A National Cable Network?

BEVERLY HILLS, CALIFORNIA, JUN 24 (AP)—Apple, IBM, and the cable television industry may be collecting on a new line of information services, if the status of their lawsuit against the Telefilm Digital World Conference in Beverly Hills are accurate. Richard Green, president and chief executive officer of Cable TV Laboratories, blamed the proposed National Information Network for the series of lawsuits he's been filing with the U.S. government after World War II.

It appears IBM and Apple are themselves in companies that can sue in and become the basis for a National Information Network. IBM's Vice President of Multimedia Loris Bjorklund said the firm is a service provider, not a hardware provider. Bjorklund said IBM has already developed the technology for a unit that would use on top of a television set, a "set-top" box capable of gigabit

speeds for data transfer that could be connected to the fiber optic cable network. Bjorklund placed emphasis on the company's interest in licensing the set-top box technology.

Apple's President John Sculley said Apple plans to provide information "services" by mid-1993 that will call on the Powerbook, the Macintosh, the newly announced multimedia player personal information system (PIS), and a planned document books. Sculley admitted Apple was itself as a hardware provider and is a key player in the information technology market.

Richard Green, president and chief executive officer of Cable TV Laboratories, emphasized the cable television network as an existing structure for the National Information Network. Bjorklund said information could be delivered in a variety of ways or "servers" just as shipping can be

done in a variety of ways depending on the type of object shipped, the needs of the shipper, and the needs of the recipient.

Andy Green, president of Intel, placed emphasis on just-in-time delivery of information in Internet. Green said speed is of the essence in the information delivery process, and Sculley, Bjorklund, and Green placed emphasis on real-time delivery of multimedia information.

The National Information Network as promoted by Apple and IBM would very much like it could make the companies public utilities, like the electric or water companies. Both companies have placed emphasis on the fact they have the technology and are willing to license it to others, but maintaining control of the technology for themselves.

However, other information networks are already in place, e.g. the telephone lines, the information exchange. A section

entitled "The Telephone Company Public Network as Information Provider?" explored the topic with speakers Ken Thompson and Robert Papp of the FCC, Steve Katz from American Online, Roscoe Balle of WATS, and David Rong of Incom.

Recent announcements of products and services under the use of the existing telephone lines for an information network were planned. AOL has announced its video telephone, which allows users and others to be connected to another through very regular telephone lines, and which will be available for use to consumers this summer. Many businesses are searching for ways for the transfer of data and services over the same regular telephone lines. High-speed information services for companies or users with modems, such as America Online and Prodigy are enjoying widespread acceptance and use.

Upcoming PageMaker 5.0 to add Long-awaited Features



Expected to be announced September 22 at the AppleTech Publishing Conference, PageMaker 5.0 will contain the following new features:

- Multiple open publications
- Broadcast of new graphics
- In-line color separation
- Numeric Control Panel for Windows version
- At-line Additions for Windows version
- Large sized printing

The two versions will be announced simultaneously, but the Windows version will ship first. There will be no PageMaker 4.2 for Windows to be upgraded directly to 5.0.

Cross-platform compatibility

Apple says it is currently working on using native and meta Object Oriented Programming techniques to make cross-platform development easier. Platforms that are definitely supported now and in the future are Macintosh OS and Windows. Apple claims it has no current plans to support OS/2 2.0, but there is interest in the Next platform.

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PRICING ANALYSIS

Emphasis On Convergence, Information Network

BEVERLY HILLS, CALIFORNIA, JUN 24 (ENR)—Timothy Andy Grove of Intel is talking about convergence, everyone at the Bayfield Digital World Conference in Beverly Hills is talking about convergence. Convergence is defined as the convergence of the various fields of science, technologies and systems that could eventually become integrated.

Andy Grove of Intel and the line speaker at the multitechnology Multisystems gathering and convergence is the "term" big thing. Grove is president and chief executive officer of the company that supplies the microprocessor chips for the IBM and compatible personal computers (PCs). While each speaker wanted to divide the technologies that are converging a little differently, basically the convergence includes the interconnection of information systems, meeting systems, multimedia (like video), consumer electronics, and the company's history.

The driving force behind the convergence is "pure greed," with each company having ambitions to get into the other guy's piece of the pie, Grove said.

Grove named the IBM-compatible PC as the infrastructure for the convergence and called the PC the "universal connector." While the majority of the conference attendees were Multisystems users—70 to 80 percent for Jonathan Bayfield's executives of the event based on the statements—Grove was understood and jokingly called it "Apple town," his company's legal opposition, "Apple," says Grove's plans.

As part of the convergence, the need for a Multisystems Information Network was discussed by Grove top executives. Stanley of Apple, Lucio Hylbrand, vice president and general manager of multimedia at IBM, and Richard Lammert, president and chief executive officer of Cable TV Laboratories. Grove said the cable companies already have a "teletext" to place the use in a Multisystems Information Network with the advent of the employment of content delivery system like. The line systems, which are replacing the coaxial cable as an increasing rate, are capable of massive communications and of carrying individual run between Grove companies.

IBM's Hylbrand talked about using the cable network already in place with a "one stop" box on a box that can be on top of the television that would be capable of playing sports for two minutes. Grove alluded to the fact that the cable companies would expect such a box to be development of the data signals as well. Hylbrand said IBM already has the architecture to produce such a "one stop" box and plans to become the technology of the box to whom to sell.

Stanley presented this business model every time the convergence issue is talked about the need for multitechnology. However, a member of the audience questioned Stanley's necessity and asked why the company's development activities, such as developing meeting high-definition television and offering video news services that are incompatible with existing computer systems, appeared as though the company was trying to slow down consolidation.

The final speaker, Allen Wilks, described as a professional artist by Jonathan Bayfield, took the convergence from a different angle and said the technology has progressed enough for artists to move in and really do something different and working with it. Wilks is a visual filmmaker using video, artist, writer, editor, and designer. Wilks has won numerous awards, including a Grammy in 1986 for Best Soundtrack for "Beverly Hills Cop," the American Film Institute's "Outstanding Workman" award in 1991, and in 1990, he was named the Art Director for his work in designing the set for Stanley Donen's "Beverly Hills Cop."

Circle 4 on readers' service card.

"While not the current multimedia the box were at the show is boring. Artists are what is needed to make it vibrant, human, and funny to draw people into the experience that may people are drawn into the experience of other media, such as film, the real."

Claris Ships MacDraw Pro 1.5

SANTA CLARA, CALIFORNIA, JUN 24 (ENR)—Claris has prepared a significant upgrade to their drawing program MacDraw Pro.

The new version is called MacDraw Pro 1.5 and it offers significant speed enhancement over the previous version. Claris is claiming 35 to 75 percent faster performance in most areas where speed is most needed including text entry, image displays, and printing.

In addition to the speed enhancements, Claris is saying that this version is full

"System 7 aware," which means that it supports all of the operating system's features including QuickTime, publish, a subwindow, Apple events, and Multitasking.

MacDraw Pro 1.5 is shipping now. It is available for purchase for a retail price of \$299. General users of MacDraw II or any of the competing drawing packages like Corel Draw or Cascade can upgrade to MacDraw Pro 1.5 for \$199. Users who are currently using MacDraw Pro 1.0 can upgrade for \$199.

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New For PC and Mac: IntelliDraw From Aldus



SEATTLE, WASHINGTON, JUN 23 (ENR)—Aldus has announced IntelliDraw 1.0, a program the company describes as a "visual drawing program for Windows and for the Macintosh. The announcement was made in PC Expo in New York.

Aldus said IntelliDraw, developed by subsidiary Silicon Beach Software, allows the user to create dynamic drawings in which objects may align, distort or be connected in whatever way the user sees, even as the objects get moved or manipulated.

The company and IntelliDraw is based on a platform-independent, object-oriented architecture that allows people to create smart screens by establishing relationships among the objects they draw. The relationship objects can be based on speed, alignment, or dimensional requirements, links or connections between objects, maintenance and other type relationships.

Aldus said the relationship can be maintained so users know the individual components change, or can be set so that a change in one object does not affect others.

The use of object-oriented architecture allows the Windows and Macintosh versions

to share a common code base, which provides for sharing. Each version imports and exports files in most standard formats. Both also support interapplication communication via "publish and subscribe" for the Mac, and object linking and embedding under Windows. Files can be exported to other Aldus programs as well as any other program that can import files in one of IntelliDraw's export formats.

IntelliDraw is expected to sell for about \$100.

Contact: Aldus Info Center, 1-800-345-0024



The Mac version of IntelliDraw exploits the features of System 7 such as Balloon Help when users describe the program's window capability. Users running System 6 or the PC version doesn't feel left out, though. The Help tool is also available as a dialog box that they be displayed as their system.

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Compaq Joins Microsoft's "Ready-To-Run Windows" Family

REDMOND, WASHINGTON, JUN 18 (ENR)—Compaq, one of the few makers in leading Microsoft's "Ready-To-Run Windows" program, now says Windows will be pre-installed on 22 new Design/30 machines.

Participants in the "ReadyToRun" program use a 486/25MHz chip on their machines to already PC, with Windows pre-installed. Windows 3.1, now recently released, has already sold over 5 million copies. Sales of Windows 3.1 are expected to reach 10 million in the first year.

Participants of Windows in a major help to most users, significantly reducing installation time. For users buying multiple PCs that time could run into the hundreds of hours, depending on the number of machines being purchased.

More than 100 hardware manufacturers already pre-installed Windows on their hardware.

Compaq announced three new families of personal computers, including notebook systems using the announcement. Included were Windows Edition machines, as well as up to run Windows: Windows Edition notebooks, in order 386 33, Windows, Windows Edition and a micro-processor, and a mouse.

Aldus said Compaq decided to join the "Ready-To-Run" program in line with Compaq's new thinking, which Aldus said "is to be made more customer driven and dedicated to customer demand."

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Lotus Launches Ami Pro 3.0

NEW YORK, NEW YORK, JUNE 16 (ENR)—Lotus Development has launched Release 3.0 of the word processor for Microsoft Windows, Ami Pro. Lotus Development (Lotus) demonstrated the software at a meeting of the New York City PC User Group June 15.

Lotus has added an assortment of new features in Ami Pro, including several of which it calls "Office Smart" features designed to speed up and simplify word processing tasks.

These include text insertion, which lets a user attach entire text selections such as underlining, bolding, italics, to a particular operation. Also, when applying them to multiple elements of text throughout the document, without having to select the elements individually for each block of text.

A new drag-and-drop feature lets users grab highlighted text and move it elsewhere in the document without the assistance of Insertions, which are used to perform specific tasks in a single operation, can now be used. And Lotus is making use of the enhanced graphics engine known as the "Graphic User Interface" (GUI) and controls such as "Modify Page Layout."

Other new features include a simplified multiple-column layout, automatic envelope printing, a word count feature, a document viewer that lets users see ahead documents while in operating the GUI, and a "Close All Documents" option that closes documents such as the style file and window to make more work space on the screen.

Ami Pro 3.0 also opens a new QuickStart screen that leads the first time the software runs, and automatically helps accessible from a button in the corner of every dialog box.

As part of a broad partnership strategy that Lotus calls Lotus Working Together, Ami Pro has several features aimed at integrating it with other Lotus applications. For one, the interface is uncluttered and consistent and receives and manages through Lotus' related electronic mail package to be more workplace efficient. It also integrates with other Lotus applications for Windows, including 1-2-3, Microsoft Excel, and Microsoft PowerPoint. Also, the Object Linking and Embedding (OLE) technology lets use Windows. An Ami Pro user can get access to these other applications without having to leave Ami Pro, a spokeswoman for the company said.

Ami Pro is to ship in Canada late July at a suggested retail price of \$999. Users who bought Ami Pro before February 1 can upgrade for \$99. Those who bought 2.0 in the last February 1 can upgrade for \$99.

Lotus also has a computer upgrade offer, users of word, spreadsheet, and database software can take claim to the \$299 in addition, the company offers a WordPerfect switch kit designed to ease conversion away from the upstart word processor by helping them make the transition in Ami Pro.

Contact: Lotus Canada, 416-864-7676.

VESA To Release Specs; VL-Bus Products to Ship in August

NEW YORK, NEW YORK, JUNE 16 (ENR)—The Video Electronics Standards Association (VESA) will release its VESA Local Bus Limited specification for review by member companies this week, and by early August, the first VL-Bus-compliant products will hit the market, said Thomas D. Ryan, executive director, at a press conference last week.

Working in PC form, Ryan outlined the concept of the limited VL-Bus and two planned enhancements, a wider upgrade and a narrower version. VESA will be looking at the specifications for the bus enhancements by the end of August, he noted.

Like other local bus architectures, VL-Bus is designed to boost performance of such peripherals as video controllers, network controllers, and mass storage by bypassing the system bus. VESA requires bus and connecting the devices directly to the CPU, and Ryan.

Like other local architectures, VL-Bus will be based on an open standard, approved by more than 100 members in a variety of companies, he maintained. "The value and networking aspects of the industry for instant, come from many different perspectives. We're excited to work together to achieve consensus," he continued.

Warren Lee, member company, stressed that, in contrast to Intel's PCI (Peripheral Component Interconnect), another emerging bus specification, VL-Bus is accessible to all interested parties. The development of VL-Bus is being reviewed not by a single vendor such as Intel, but by an industry-wide governing body, called the VESA, presided by Alpha Research, a VESA member company that produces similar local bus products.

Ryan explained that, in an 80-megabyte, VL-Bus will enable up to three 133-MHz devices to be placed directly onto the CPU bus. In addition, full support for the new operating devices will be incorporated, working at a maximum data transfer rate of more than 133 MBps.

The bus will support local processors from 386SX through 486SX2 and the upcoming P5, or "P6," processors, introduced Ryan. The upcoming 64-bit

enhancements—intended to double the data transfer rate to 266 MBps—will be backward-compatible with all VL-Bus devices, he said.

The economic rationale will be confirmed similarly to the VMEbus, he said, except that all signals and bus operations will be fully decoupled from the CPU. Bypassing a function also offered in PCI, will enable additional work capability to be added in each segment, thereby decreasing expansion costs. Bypassing will also provide CPU independence. Currently, VL-Bus is supporting a 16-bit expansion option, according to Ryan.

At the close of the press conference, Ryan and Lee were prepared with questions, creating around such topics as the status of developing companion products before a specification has been formally approved, and whether or not PCI devices can be used on a VL-Bus.

VL-Bus is slated now to be approved, supported by IBM, because the specification has already gained the unanimous support of VESA's 100-member companies. Ryan, 40, an early leader of VESA's member companies, "We have the specification in hand when the agreement started to come down in pressure," he noted.

PCI devices can, in fact, be operated on a VL-Bus, said Ryan, in response to the second issue. "It's not that, though, Lee chimed in. "They could be, but that would be a pity line."

In an interview with ENR's senior editor, Lee explained on the company. VESA will meet approximately once, enabling members to connect PCI devices to the VL-Bus, he said. "We basically are not allowing a major rule, as if there's ever a really good reason for removing these devices, it could be done," he continued.

Possibly because fear concerning the device might include the status of a large system vendor to make use of existing PCI chips in building a VESA system, or the development of a bus in a pre-conference between the PCI. "We all know know, in most point, somebody may build some killer PCI thing that leaves VL-Bus obsolete," he asserted.

Contact: VESA, 617-493-0000.

Lotus PIM—The Organizer

CAMBRIDGE, MASSACHUSETTS, JUNE 15 (ENR)—Lotus Development has rolled out The Organizer, the Windows personal information management (PIM) application from the British firm. The software recently, under its own name and not released previously.

Lotus Organizer, Version 1.0, will sell for \$49.95 in the United States. The software will also be available for the OS/2 (Lotus OS/2).

Lotus is also offering users of Agenda 2.0, its OS/2-based PIM, the opportunity to upgrade to OS/2. Canadian prices are not yet determined, according to the company.

A spokeswoman for the company said that while Lotus will continue selling Agenda which was one of the first personal information managers on the market, it will not produce a Windows version. Agenda is currently available for OS/2 only. Lotus plans to offer users of Agenda 2.0 a utility disk will move from Lotus to Windows version, a ported Agenda application, to Lotus Organizer.

The Organizer tracks and lists like a traditional paper organizer, such as Day-Timer or Planner. According to the vendor, it is useful for maintaining personal calendars.

daily planning and organization, time management, and keeping contact lists.

Lotus Organizer displays information in a problem-oriented manner, and users can create a calendar, a planner, and a to-do list. The software also includes features such as calendar, planner, and to-do list. The software also includes features such as calendar, planner, and to-do list.

The software also includes features such as calendar, planner, and to-do list. The software also includes features such as calendar, planner, and to-do list.

Information in different sections can be interconnected with "links." For example, a user may link an appointment in the calendar with a meeting agenda or a note.

Characteristics typically range from changing with notes and colors to defining or displaying any of the up dates sections. Planner, Mailbox, To Do List, Address, Calendar and Documents. Just add graphics files can be imported from other Windows products.

Lotus Organizer runs on PCs with at least an 80386 processor, the DOS operating system, Windows 3.0 or higher, a hard disk, and a VGA monitor. The software is available in a VGA monitor. The software is available in a VGA monitor.

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"If you take the computers on this planet, over 80 percent of them run Microsoft operating systems. The only two that sort of show up at all are ours and Apple's."

—Microsoft Chairman Bill Gates

Zeos introduces 1.3-pound Paintop

ST. PAUL, MINNESOTA, JUN 16 (UPI)—Zeos International has introduced a 1.3-pound paintbox with DOS and Microsoft Works in ROM. The company said the unit will be shipping within 30 days, and will keep a price tag of US\$100 as an standard configuration.

The Zeos Pocket PC has 1 MB (expandable to 32MB) random access memory, and 1.3 MB ROM (load only memory). Enclosed in ROM is DOS 3.0 and Microsoft Works. Works includes a spreadsheet, word processor, a database, the calendar, and communications programs.

The system also includes two built-in PCMCIA slots which will accept memory cards containing additional software or can be used for system data storage. The unit is as thin as a credit card. Zeos spokesperson Rick Apple said Microsoft said the price of the cards has not been determined.

Zeos said the Pocket PC's features will provide up to 10 hours of continuous operation, and will maintain data for up to 30 days in the expanded mode. Apple said NeXTstep said that the keys on the 11-key keyboard are very similar to a standard desktop keyboard, and are designed for touch typing. The keyboard contains 12 function

keys as well as an embedded numeric keypad and special keys that access pre-installed software modules. Zeos said that users to access the programs embedded in ROM, Apple said the keys are slightly closer together than those on a desktop PC, and have less travel.

Zeos said the LCD (liquid crystal display) video display measures 7 inches wide by 3 1/2 inches high, and has an adjustable brightness screen with an 80 column by 10 line display, comparable to desktop and laptop units.

Zeos said an optional dock/box system which measures 6 inches high and fits at 6000 dpi. The external system connects to the single-sided port. Apple said NeXTstep said that the port has not been finalized yet, but expects the system on sell for under US\$250. The Pocket PC also provides non-volatile power.

In addition to DOS and Microsoft Works in ROM, Zeos has also included a file, calculator, serial setup programs, and a planner.

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Canadian Regulators Approve Long-distance Competition

OTTAWA, ONTARIO, JUN 15 (UPI)—Canada's federal telecommunications regulator has ended a controversial monopoly on long-distance telephone service across most of the country, approving two applications to offer long-distance service in competition with established telephone companies.

While still a new, telephone regulators in Ottawa said the decision is the first in a series of steps to open up the market for at least one alternative to the provincial and regional phone companies that will now have restricted all long-distance traffic. Competition is at least one of the remaining three provisions in probability and the federal.

Major telecommunications users are pleased. "We're delightedly surprised," said George Boudreau, president of the Canadian Business Telecommunications Alliance (CBTA), a group of major companies using telecommunications services. "We, then, probably no mind—I guess we're really excited."

Others are not so sure. Philip Lawson of the Public Interest Advocacy Centre in Ottawa expressed concern that while the CRTC said it will not open the ruling as a result of an increase in local rates, it did not offer provisions.

The Canadian Radio-television and Telecommunications Commission (CRTC) approved an application by United, a Toronto-based provider of data communications services, to compete with telephone companies in British Columbia, Ontario, Quebec, New Brunswick, Prince Edward Island, New Brunswick, and Newfoundland.

When United filed its application in May, 1992, telephone companies in Alberta, Saskatchewan, and Manitoba were previously regulated and thus not subject to CRTC jurisdiction. Since then, Alberta has come under federal regulation and a United spokesman said the company plans to apply there as well as have in another application to that province.

The CRTC also approved a second application from Light, a Toronto provider of communications services, and B.C. Rail Telecommunications of Vancouver. This new provider would compete long-distance services in British Columbia, Ontario, and Quebec—Canada's three most populous provinces.

In granting these two applications, the regulator has not strong signs that there will be long-distance competition in Canada before the American model, a market open to an unlimited number of players, rather than the present British model, where only two companies operate.

In the CRTC statement announcing the first decision, Leslie (Bert) Blomquist, who chaired the hearings, said the regulator had decided that a "policy of open entry would be the best way to stimulate the benefits of competition. Consequently, we will be tentatively prepared to future applications filed under similar circumstances to provide long-distance service if applicants abide by the terms and conditions established in this decision."

Blomquist pointed this aspect of the decision, in particular, saying an open market

market is needed to encourage all companies to provide the best possible service. The ruling said that this has happened so that they work under a "dynamic," he said. "We don't want market sharing."

"The CRTC has introduced the rules governing the mode and timing of selection of new services, allowing services to be offered by the existing regulated providers (RPs) in all federally regulated provinces and extended the rules that have governed other federal jurisdictions to Newfoundland, Nova Scotia, Prince Edward Island, and New Brunswick (which come under federal regulation more recently)."

John Jurek, a spokesman for United, said his company will be able to offer long-distance services to business customers on a limited basis almost immediately. The company plans to begin a general rollout of service in a year, he said, and within a year there also may begin to make long-distance service available to about 80 percent of the people in the provinces it will serve by the end of the second year of service. He added, about 80 percent of telephone subscribers in the affected provinces should have access to United service.

At the time, those who want to use competitive services will have to dial area digits or use the telephone number to reach their calls over the United or B.C. Rail/United network. Within a couple of years, Jurek said, telephone numbers will be required so that individuals can choose an long-distance provider and have their calls routed to that network automatically, as happens

now in the United States.

Lawson questioned the benefits of the decision for its unfunded customers and those in rural areas. Many residential customers don't use long-distance service enough to make a change of carrier problem worthwhile, he said. He added that all companies will probably co-optimize on pricing as much as possible of the long-distance traffic between major urban centers, meaning new contracts and discount offerings are unlikely to be made available to those in remote areas and rural areas.

Bert Gaudin, the Ontario Canadian phone company with service in Ontario and Quebec, responded to the announcement with complaints that the rules give an unfair advantage to its new competitors. While the decision requires United and B.C. Rail/United to make payments to the regional phone companies in support local service, Bert said, it does not make them pay their full share.

However, a position statement from the office of Bert Gaudin's Chairman and Chief Executive, James Blomquist said Bert has no plans to contest the decision. "I did like a card player who's been dealt a hand of cards," Blomquist said in the statement. "Now he's playing."

Bert Gaudin did not respond to a request for further comments by Newswire's editors.

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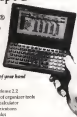
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Intel, WordPerfect, 10 Others Support TWAIN

NEW YORK, NEW YORK, JUN 17 (ENR)—As PC users take word, text, illustration, and design on other windows-based desktop publishing systems, many are looking for their support for TWAIN—helping to move data to the word processor or layout for the new imaging API and protocol.

The newly announced supporters will start to ship TWAIN-capable products in three to four months, according to Hewlett-Packard's Ken Iyer, chairman of the TWAIN Working Group, during a press conference in PC World. In addition, he stressed, 11 of the previously announced

backers were

shipping TWAIN-compliant items at the time.



WordPerfect

Formulated by HP, Aldus, Corel, Microsoft, and Logitech, club leaders from third-party vendors, TWAIN is designed to permit easy integration of desktop publishing, word processing, image editing, and other software with desktop peripherals as scanners, video boards, and cameras.

The new specification enables the user to "capture images"—or make a choice between available capabilities before delivery—straight from the application software screen.

This capability streamlines a workflow, and stepped process that requires the user to run the application software, enter the software installed with the peripheral, and save the image to file, and then enter the peripheral software, review the application software, and import the image file.

At the press conference, Iyer informed ScanSoft that, although TWAIN is rapidly becoming an open industry standard, the specification was initially offered in a proposal only.

"I would have been surprised if we try to impose a standard, but we decided to take things from the opposite end, looking the other way and develop whatever this is a specification they want," Iyer told Newsbyte.

During the briefing, Iyer announced that its Penality Plus and Penality Plus/CE software for Windows will look support TWAIN. Penality Plus ships this week.

WordPerfect noted its intention to implement the new specification in its Windows and Macintosh products.

Other companies announcing their support included Microsoft, Océan Recognition Systems, Stuart, OCR Source, Praxis Technology, Ultron Systems, Hamamatsu Corporation, Orion Systems Inc., and Seiber.

At the briefing, Microsoft noted that shipment for begins on Picture Publisher 3.1, an image editing package that supports TWAIN as well as GDI and Metafile from OS.

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LINK LINKS

New Unix System V Release 4.2 Easier To Use

ANNAPOLIS, NEW JERSEY, JUN 17 (ENR)—In its System Laboratories has updated what is widely considered the industry version of Unix, made known as Unix, to making the operating system easier to use and a bit more practical in smaller companies.

The key enhancement is a "desktop computer" graphical user interface on top of the traditional Unix system. What this means is that while the "V" group focuses on Unix users (the consequences of the OS operating system's "C" program) will still be available, "you won't see it any more unless you want to," said by Schwartz, spokesman for Unix International.

Schwartz said the new interface is complementary to Unix International's Open Look and the new Open Systems Foundation's Motif, both of which are windowing systems aimed at work with Unix, and the work with other Unix.

Base Unix is "the real way the biggest enhancement in Unix System V Release 4.2, Schwartz said. However, there are more other changes.

One that affects contractors as well as the capacity of the system is the new release's release of having the machine on which it is running installed all without proper shutdown procedures. In the past Unix, unlike DOS, required users to follow a shutdown procedure, before having their machines shut. With doing so is "all problems," Schwartz said, the new release will occur gracefully if users don't.

In making the new release more maintainable, UNIX has also made it possible to install Unix on a personal computer with only four megabytes (MB) of memory and a 20MB hard disk. The previous minimum

was about eight MB of memory and 20MB of hard disk, Schwartz said. The enhanced requirements will make Unix more practical for use on off-line mainframes in a client/server environment, UNIX predicted.

The new release also includes Adobe Systems' Type Manager software and version of PostScript Type 1 fonts. This means Unix will offer better support for desktop publishing, printmaking graphics, and other applications that call for an environment of fonts.

In addition to running applications across the previous version of Unix, a Unix System V Release 4.2 will comply with the Open Software Foundation's Application Environment Specification, and with the addition of additional software available from several vendors to run the applications written for the OS and Microsoft Windows, UNIX said.

While final retail prices will be set by companies that install Unix and will vary with the hardware platform, Schwartz said, Unix System Laboratories has agreed the software to sell for less than \$200 on desktop PCs. The new system should be available later this year, he said. Unix's great strength beyond DOS, and local area network vendor Novell, plans to sell it through Novell's distribution channels as well as in-house.

On top of that, Bell, P. International, announced that it will use the new Unix release on a future line of desktop computers based on Intel's i386 processor line.

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Early on the 4th Team picked up a couple of newspaper beatings. One of them, Gary A. B. while late and very drunk in a parking lot across the street from CUJ's waiting for the Team's partner to come back from the store. About twenty minutes later his car rolled into the lot and up beside us. "It's a damn dead, dead!" he shouted as he crashed his windshield into the car.

We and Team exchanged a few short, nervous glances when the car rolled into the lot and up beside us. "It's a damn dead, dead!" he shouted as he crashed his windshield into the car. We and Team exchanged a few short, nervous glances when the car rolled into the lot and up beside us. "It's a damn dead, dead!" he shouted as he crashed his windshield into the car.

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Continued on page 80

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Microsoft Enhances Word 5.0 for Mac

Microsoft has released Word 5.0 for Mac (available directly from Microsoft), as the earlier versions only as (Word) for use with Microsoft Word for the Macintosh version 5.0. The patch has a problem that was discovered with Word version 5.0 that occurs when exchanging files on different machines. This problem resulted in files being changed to the default font in style.

The patch fixes the program and introduces new features in Word 5.0 for Macintosh. It is now a full-fledged word processor.

Grammar & Spelling Modules Updated

A revised set of Grammar and Spelling Modules is also available for Microsoft Word for the Macintosh version 5.0 (owners in Macintosh mode). These modules provide a new set of commands and spelling commands. In addition, the Spelling module includes several improvements.

The new Grammar module addresses problems that sometimes cause Word to quit unexpectedly when running on the Macintosh Plus, II, Classic, Portable, and PowerBook 100 models.

Changes were made to the Spelling command in three areas:

1. more feedback is provided on the progress of a spelling check.
2. When you choose the Spelling command, the message "Loading Spelling Dictionary" now clearly appears on the screen to signal that Word has begun to check spelling.
3. You can expect a spelling check in any time by pressing command-S (S) or by pressing F7.
4. In large documents, when Word is working for the next misspelled word, the percentage of the spelling check that has been completed is indicated by the lower-left corner of the document window.
5. The editing of large custom dictionaries is easier.
6. Editing a custom dictionary is much faster, and there is less delay when you close the Spelling dialog box after you have added words to a custom dictionary.

3. The handling of "ignored" words has been improved.

4. The Ignore All button now causes Word to ignore words for the entire Word session. This is, when you choose the Ignore All button, all instances of the ignored word are ignored during the current spelling check, and any other spelling checks you make will not quit Word.

5. A new button, named "Ignore All" List, has been added to the Spelling category of the Edit menu command (Word menu). When you choose this button, the Spelling command will no longer ignore the words you have chosen with the Ignore All button in the Spelling dialog box.

Microsoft has also modified a QuickTime option for Microsoft Word 5.0. In addition, which is available to users of changes to registered Word users, is also available on the AppleLink network under the third parties/ Microsoft Word users.

Support for QuickTime has been implemented in Word 5.0. It is available to users of changes to registered Word users, is also available on the AppleLink network under the third parties/ Microsoft Word users. Support for QuickTime has been implemented in Word 5.0. It is available to users of changes to registered Word users, is also available on the AppleLink network under the third parties/ Microsoft Word users.

AppleLink users, product marketing managers with Microsoft's U.S. office, claim that QuickTime brings improvements to the design of the Word and more than Microsoft is one of the first Macintosh to integrate QuickTime into the company's product line.

QuickTime will be available with all new copies of Microsoft Word 5.0 that have been installed on the Macintosh. Existing registered users should receive their upgrade copies for the first time. Existing registered users that upgrade to the new version of Word 5.0 will also receive a copy of the new version of Word 5.0.

Contact Microsoft, 800-888-8811

The Photo's Thing Continued from page 29

As well, as less new it's over. Old names are a mistake, the phone is ringing. "Hello! Hello! You are a friend you are a copy and can now look Big Mac software and you're looking inside getting a working copy! Oh yes, a friend, but it's only been on the market two months. But the package!" (He said)

There are you again. Maybe I should call GARY? Well again, who would they want to do with a small company like it even if

we could afford to help?

The story you have read is entirely true and based on the fact we have been in the. The name of the company has been changed to protect their identity and the name of the Macintosh Plus (MP) has been omitted because our attorney said we should not do it.

Richard and Graham Armstrong are the principals of Cancom Corporation, a Toronto-based software development and publisher.

regiment with the modem. Even in a large office, staff may become frustrated with co-workers who utilize the modem in a kind of electronic party line that sends annoying messages. Fortunately, the owner's ID code or e-mail machine as a groupware with junk mail and the acknowledgment feature of the modem becomes problematic. If for no other reason, this illustrates the importance of a carefully chosen subject line when using the modem.

Moreover, e-mail's inability to function spontaneously—as we do in a conversation—means it is often necessary to send several messages in order to ask questions or clarify a message, as in a verbal interaction we solve this problem by interrupting the speaker, albeit briefly, at the top of their pauses. The limitation that the system offers "false opportunity or call for revision," as noted by Marshall McLuhan in 1964, applies equally well to the use of e-mail. Evidently mail has no comparable sense of timing and the message is "received" and a pause then to "read."

When e-mail does succeed in the area of privacy, providing it's read, correspondence from management can carry a more authoritative message simply because it is printed, as opposed to verbal, from industry experts and articles are frequently forwarded for attention while sitting in front of desktops because we still possess knowledge and authority with the printed word. In a modern office, it is not unusual to have a worker conclude a verbal conversation with the request, "Send me an E-mail on it," just as it is difficult, in comparison to the still stronger voice of a professor's serious subject, the E-mail here is being used to follow up on a serious subject. But in both cases the actual body of the communication requires verbal skills, because the electronic medium lacks the oral wisdom so vital to effective communication.

Bernad Sabones Vahanian

E-mail's popularity in the business office is now so well established that it has become a replacement, rather than an alternative, means of communication. Computer professionals, for instance, are often accused of an over-reliance on e-mail and a lack of interpersonal skills. In fact, a 1992 survey by the Canadian Government determined that an overwhelming majority company secretaries due to a perception that the industry employs only "nerds" or social misfits. Barbara L. Granger's recent book, *Deadend Engine* (Random House), is a criticism. Now the steps of Silicon Valley make their mark, *hedge-fund companies* and still can't get a date. The use of e-mail as a replacement for interpersonal skills only perpetuates this state.

This problem is compounded by the fact that most of us are far more skilled at written communication skills than oral ones. A typical office conversation is rarely extended with the same grammatical complexity as apply to written correspondence (including e-mail). What is acceptable in colloquialism in a verbal exchange is usually frowned in written form.

If the subtlety of an e-mail request is to be maintained, the same rules governing official correspondence must be followed as, just as letters have been denied on the basis of poorly composed cover letters, written requests are denied from disorganized notes. One the morning's busy mail envelopes, for assurance involving the subject, there's more to read than mere content.

Paul Sabones is an officer with the City of Calgary in the Data Processing Services Dept. and a freelance writer for several magazines. Contact him at 403-268-6221.

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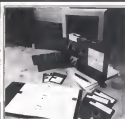
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Digital World: Actresses, Artists Debate Multimedia

BEVERLY HILLS, CALIFORNIA, JUN 15 (UPI)—Actresses Shirley Dinsdale, Jane Fonda, and Althea Williams are being recruited by a multimedia company to act in a series of short films that will be used to promote the company's new multimedia software. The films will be used to promote the company's new multimedia software.

Fonda, Jane Fonda, and Althea Williams are being recruited by a multimedia company to act in a series of short films that will be used to promote the company's new multimedia software. The films will be used to promote the company's new multimedia software.

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Adobe Releases Suite Of PC-Oriented Products

MOUNTAIN VIEW, CALIFORNIA, JUN 15 (UPI)—Adobe Inc. has released a suite of software products designed to help users create and manage digital content on their PCs.

Among the new products are three new software offerings: Adobe Photoshop 3.0, Adobe Illustrator 8.0, and Adobe InDesign 1.0. These products are designed to help users create and manage digital content on their PCs.

Adobe Photoshop 3.0 is a new software offering that allows users to create and manage digital content on their PCs. Adobe Illustrator 8.0 is a new software offering that allows users to create and manage digital content on their PCs.

Adobe InDesign 1.0 is a new software offering that allows users to create and manage digital content on their PCs. Adobe Photoshop 3.0 is a new software offering that allows users to create and manage digital content on their PCs.

media often for life, and the film's high level of realism was a significant factor in its success. The film's high level of realism was a significant factor in its success.

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B.C. Telephone To Appeal Long-Distance Ruling

VANCOUVER, BRITISH COLUMBIA, JUN 15 (UPI)—British Columbia Telephone, the second-largest of several Canadian telephone companies, has announced it will appeal a recent ruling that will allow long-distance competition.

BC Tel announced it is appealing a ruling which parts of the ruling covering long-distance service and the way the rate of monthly service is calculated. The ruling was issued by the British Columbia Utilities Commission.

The ruling is also being appealed by the British Columbia Telephone Company. The ruling is also being appealed by the British Columbia Telephone Company.

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Apple, Toshiba Team To Create Multimedia PDA

CUPERTINO, CALIFORNIA, JUN 15 (UPI)—Apple and Toshiba have announced a joint venture to create a new multimedia personal digital assistant (PDA).

The new PDA will be a combination of a personal digital assistant and a multimedia player. The new PDA will be a combination of a personal digital assistant and a multimedia player.

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Circle 17 on Reader Service Card

The CRTC has told B.C. Tel to pay at least 70 percent of the cost of connecting the new carriers to its network.



Apple, Toshiba Team To Create Multimedia PDA

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Microsoft Will Develop Windows NT Family Of Apps

SAN FRANCISCO, CALIFORNIA, JULY 7 (ENR)—More than 4,000 software developers from around the world learned from Microsoft that the company intends to develop a full family of 32-bit applications for the Windows NT operating development.

Windows NT (aka NT) stands for New Technology as described by Paul Maritz, head of the Windows NT program group, in a kind of Windows is normal? It is software with specific new service features. Microsoft has said it will introduce the 32-bit Windows NT by the end of the year, although recently executive VP Steve Ballmer has said the final release date "is not in issue." Ballmer cautioned that Microsoft will use a lot of things in the before the product comes to market.

According to the Ballmer story, Microsoft may have plans to modify Windows NT software on the machine, process, and architecture.

Microsoft has said that its strategy is to make Windows stronger enough that users will want any other computer system such as IBM's OS/2 and that requires revision of those available. Users have consistently had a problem accepting the business community is to advantage, probably due to its high selling price.

Ballmer said Ballmer that Microsoft plans to distribute copies of the program to end users in September for final testing.

Microsoft VP of Development Applications Paul Higgins said the successful developers that Microsoft plans to make a leadership role in development of 32-bit applications to include the "best" for our users in Windows NT.

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Microsoft applications groups are ending an early commitment in Windows NT, and Higgins.

Conference attendees will receive their developers has including those CD-ROM data with the Windows NT (application program interface) and the NT for System, as well as a 32-bit version of C/C++ and a 32-bit version for 386, Windows with data generated by users. It is said that Windows NT is Windows developer, and the Windows NT system debugger. Developers who did not attend the conference can get the NT for \$500 with documentation, or \$800 without the data by contacting Microsoft.

Microsoft spokeswoman Catherine Lavoie told Newsbytes that developers will need a 386-based system or better, a minimum of 12 MB (megabyte) of RAM (Random Access Memory), and a whopping 100 MB of hard-drive space as well as a CD-ROM drive.

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Info Shortage/Too Much Paper, Says Business Report

LONDON, ENGLAND, JUL. 8 (AP)—About 70 percent of organizations believe that they have too much paper (the bulk of which they purchase themselves), according to the latest report on Information Management from Trade Risk Management Consultants (TRMC).

Those same companies also see their top problem as not having enough good or new tech records. According to TRMC, new organizations with 2,000 employees each will 44 days of increasing mail last year yet managed to generate 40 times of missing mail through in past year. That explains. Nevertheless, most, or around 25 tons of paper per person a year.

One of the major findings of the report shows that, despite the paper shortage, most companies are worried of information, due to the poor management of their records. TRMC's report found that less

than 40 percent of staff have the right amount of information to do their job properly.

"We considered the money to contain our belief that businesses are suffering more by not accepting information technology," explained David Best a partner in TRMC. "We know that there are significant benefits to be gained and we would not say if we could already then and already say of the public, encountered along the way," he added.

TRMC managed to persuade more than 250 companies to respond to an survey, from a wide range of public and private organizations. The key findings of the report, the company claims, highlighted many of the current problems experienced with information management and the waste in terms and redundancy associated with it.

Other major findings of the report were

A document provides the use of electronic data and office systems is expected with about 70 percent of companies from strong high use by the end of the decade compared with under 30 percent at the moment. The report stressed that there is a definite trend in rapid change, but not to the reduction of other media.

Although 67 percent of organizations use electronic facilities in more than moderate frequency, only 18 percent have bought new Digital Networks (DNN) data. There is also a tendency for some small companies to view the electronic contents of documents as a replacement for working paper than those spending solely in the UK.

Voice recognition is still in its infancy and is seen by 71 percent of companies as not a place to implement it.

More than a third of organizations can execute information systems (EIS) or alternative methods to obtain rapid access of corporate information. Traditionally aimed at the private sector, there is an increasing demand for these

tools by public sector bodies, fuelled by the creation of electronic agencies by the New Conservative.

Copies of the report are available from TRMC's Free-Form London office for £12.95.

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Canada: BC Tel Files For ISDN Service

VANCOUVER, BRITISH COLUMBIA, JUL. 8 (AP)—British Columbia Telephone has filed an application with federal regulators to start offering Integrated Services Digital Network (ISDN) service this fall. BC Tel's Vancouver service would initially be available in central Vancouver, Victoria, and Kelowna.

Data handling service development manager at BC Tel said the Montreal-based service would require ISDN applications such as desktop videoconferencing and Group W. It would also provide other services, he said.

The service will carry a monthly fee of C\$15 in Vancouver, with a lower fee in some centers with smaller local calling areas. Subscribers will also pay usage charges that will be about twice current long-distance rates, officials said.

BC Tel has been involved in ISDN work over the past two years. Applications that have been filed are expected to be discussed in a public hearing in which comments at four locations would be taken and worked together. Staff in Vancouver and other locations would be involved in the process, he said.

BC Tel has asked the Canadian Radio-television and Telecommunications Commission (CRTC) to approve the Montreal-based service effective October 1. During 1993 the utility plans to launch Montreal and Prince George and a number of other cities throughout Vancouver.

Contact: BC Tel, 604-684-0800, ext. 684-6850 (AP)

Online Services: Review, Trends and Forecast

Online service sales grew by 63.1 percent between 1987 and 1991, reaching \$1.0 billion last year, according to Globe Information. The latter report, "Online Services: 1992 Review, Trends and Forecast," predicts a 40 percent sales increase in the next five years, yielding a \$14.7 billion online services market in 1996.

According to the report, there were 5.4 million online service subscribers at the end of 1991 and leading online services posted a 6.7 percent sales increase in 1991 compared to 1990. Information services, dominating in price and other metrics, posted less than one percent growth during the year.

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IBM Announces Multimedia PM For OS/2

ATLANTA, GEORGIA, JUL 9 (UPI)—IBM has announced that its line of multimedia OS/2 2.0 to incorporate sound, graphics, video, and images called Multimedia Presentation Manager/2 (MMPM/2) is now available.

The company says the MMPM/2 has a standardized interface and provides device independence, which minimizes the care from the underlying configuration and the various programs are more portable. IBM is asserting the value of MMPM/2 offers applications and tools to be utilized independent of the variety of multimedia devices and formats available.

Also, IBM says the resource manager has also MMPM/2 has a device-independent interface which allows full use of the multimedia hardware available. IBM also maintains MMPM/2 can incorporate a new data type and format to give users the ability to create multimedia.

An MMPM/2 Toolkit is available from IBM for the integration of multimedia into new and existing OS/2 applications, the company said. The toolkit includes design tools, templates, and sample pro-

grams. MMPM/2 supports OS/2 2.0 and runs on OS/2, the company said. The MMPM/2 Toolkit/2, which includes MMPM/2, comes on compact disc read-only memory (CD-ROM).



(CD-ROM) for a retail price of US\$199. (Consulting pricing and evaluation had not been determined at press time—UPI.) IBM is also selling its "Communications, Dictionary and Beyond" and

"Electronic Books and Manuals" multimedia applications. IBM says these are available under OS/2 2.0. The Multimedia Toolkit is now available at the IBM COMDEX show in Las Vegas and shipped in January of this year, IBM said.

General content of the educational market, IBM offers an interactive multimedia and each component 190 hours of instruction or the equivalent of a full academic year of study, IBM said. The programs have multimedia as well as education appeal and were developed in conjunction with multimedia professionals, IBM added.

The company offers each program at an educational discount of US\$1,900 each, which is 50% off the street price. IBM also offers a multimedia PM/2 development tool that can be purchased in a package for the dollar to be played upon which includes IBM Personal System/2 Ultimate 386 SX 386 computer, the company said.

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